

TYPHOID FEVER

What is typhoid fever?

Typhoid fever is a life-threatening illness caused by the bacteria *Salmonella typhi*. The illness causes sustained fever, headache, malaise, anorexia, relative bradycardia (slow heart rate), constipation or diarrhea, and nonproductive cough.

Who gets typhoid fever?

Anyone can get typhoid fever if they drink water or eat food contaminated with the *S. typhi* bacterium. In the United States, about 400 cases occur each year, and 70% of these are acquired while traveling internationally. Typhoid fever is still common in the developing world, where it affects about 12.5 million persons each year.

How is typhoid fever spread?

You can get typhoid fever if you eat food or drink beverages that have been handled by a person who is shedding *S. typhi* or if sewage contaminated with *S. typhi* bacteria gets into the water you use for drinking or washing food.

How soon after exposure do symptoms appear?

Symptoms can occur within three days up to three months after consumption of contaminated food or water, usually in 1-3 weeks.

How is typhoid fever diagnosed?

Typhoid fever is diagnosed by isolating *S. typhi* from blood or stool.

What is the treatment for typhoid fever?

Antibiotics are used to treat typhoid fever. Persons given antibiotics usually begin to feel better in 2 to 3 days, and deaths rarely occur. However, persons who do not get treatment may continue to have fever for weeks or months, and as many as 20% may die from complications of the infection.

What is important to remember about typhoid fever is that, even if your symptoms go away, you may still be carrying *S. typhi*. If so, your illness could return, and you could pass the disease along to other people. If you work at a job where you handle food or care for small children, you may be barred legally from going back to work until a doctor has determined that you no longer carry any typhoid bacteria.

If you are being treated for typhoid fever, it is important to do the following:

- Take the prescribed antibiotics for as long as the doctor has asked you to take them.
- Wash your hands carefully with soap and water after using the bathroom, and do not prepare or serve food for other people.
- Have your doctor perform stool cultures to ensure that no *S. typhi* bacteria remain in your body.

How can typhoid fever be prevented?

Two actions can protect you from typhoid fever (if in an area where the disease is common): a) avoid risky foods and drinks; and, b) get vaccinated against typhoid fever.

If traveling to an area where typhoid fever is common, the following precautions are recommended:

- If you drink water, buy it bottled or bring it to a rolling boil for one minute before you drink it. Bottled carbonated water is safer than uncarbonated water. Other safe beverages include tea and coffee made with boiled water and carbonated, bottled beverages with no ice.
- Ask for drinks without ice unless the ice is made from bottled or boiled water. Avoid popsicles and flavored ices that may have been made with contaminated water.
- Eat foods that have been thoroughly cooked and are still hot and steaming.
- Avoid raw vegetables and fruits that cannot be peeled.
- When you eat raw fruit or vegetables that can be peeled, peel them yourself. (Wash your hands with soap first.) Do not eat the peelings.
- Avoid foods and beverages from street vendors. It is difficult for food to be kept clean on the street, and many travelers get sick from food bought from street vendors.

A simple rule of thumb is: "Boil it, cook it, peel it, or forget it!"

Both injectable and oral vaccines are available. Visit a doctor or travel clinic to discuss your vaccination options. Even if you are vaccinated, however, it is still more important to be aware of what you are eating and drinking. The vaccines are not 100% effective, and avoiding risky foods and drinks will also help protect you against other illnesses, including cholera, dysentery and hepatitis A.

Where can I get more information?

- Your personal doctor.
- Your local health department listed in your telephone directory.
- The Utah Department of Health, Bureau of Epidemiology (801) 538-6191 or Immunization Program (801) 538-9450.
- The Division of Quarantine, National Center for Infectious Diseases, Centers for Disease Control and Prevention has information on typhoid fever and other diseases of concern to travelers at <http://www.cdc.gov/travel/travel.htm>

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